A LEAF-EATING LADYBIRD (*EPILACHNA 28-PUNCTATA* (FAB.)) IN SOUTH-WESTERN AUSTRALIA

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The finding of the leaf-eating ladybird (*Epilachna 28-punctata* (Fah.))—both larvae and adults—at Rivervale in March, 1956, is apparently the first record of this beetle in South-western Australia. The insect is native to Eastern Australia and the Kimberleys but has not been collected previously from the temperate regions of this State.

Members of the genus *Epilachna* are troublesome pests on various cultivated plants including tomatoes, potatoes and cucurbits, so that the appearance of such beetles in our agricultural areas could be of considerable economic significance.

The leaf-eating ladybird has the typical rounded appearance common to most members of the group, is about a quarter of an inch in length and yellowish-brown in colour. There is a characteristic pattern of from 24 to 28 black spots on the wing covers from which the scientific name is derived.

This ladybird should not be confused with the somewhat similar beneficial species, *Leis conformis* (Boisd.), which has a pattern of from 16-20 (usually 18) spots on the elytra and is known popularly as the 18-spotted ladybird. The life history of the insect has not yet been studied under local conditions, but may be expected to conform with observations made elsewhere. The elongate-oval, yellowish eggs are normally laid in clusters on the under-sides of the leaves of host plants. Here the developing larvae feed for about three weeks, after which pupation takes place either on the food plant or in adjacent rubbish. The adult beetles are quite sluggish in their movements and, in contrast to the larvae, frequently feed on the exposed leaf surfaces.

Although the adult ladybird may be confused with the 18-spotted variety, the larvae of *Epilachna 28-punctata* have a very characteristic appearance. They are thickly covered with quite long branched spines which make them look almost like miniature hedgehogs.

When feeding, the ladybirds destroy the green tissues and leave the reticulate vein pattern as an almost colourless film. So far only two records of beetle damage have been discovered locally; one at Belmont where a solanaceous weed was being attacked, and one in a St. George's Terrace garden where tomatoes were affected.

In recording the first appearance of the leaf-eating ladybird in South-western Australia, it is interesting to draw attention to the recent arrival in this State of the paper wasp (*Polistes variabilis* (Fabr.)) (Glauert, 1950; Douglas and Serventy, 1951).

Polistes and *Epilachna* have a very similar distribution in Eastern and Northern Australia as does the pumpkin beetle, *Aulacophora hilaris* (Boisd.). The fact that two of these insects have finally entered the South-West either from the east or the north poses the question as to whether or not the pumpkin beetle may make a similar extension to its range.

Although the three insects mentioned are found in various temperate situations in the Eastern States, the genera are typically tropical and sub-tropical in origin. It will be of interest to note whether the colonies already established are able to persist and spread. Mr. D. C. Swan, of the Waite Agricultural Research Institute, Adelaide, has informed me that invasions of *Aulacophora* have occurred in South Australia in certain seasons but that no permanent colonies are known to have survived.

REFERENCES

Glauert, L., 1950. *W. Austr. Nat.*, 2 (6): 139.
Douglas, A. M., and V. N. Serventy, 1951. *W. Austr. Nat.*, 2 (8): 169.

A NEW ANGLER FISH

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It is with great pleasure that I contribute to the *Western Australian Naturalist* a short paper in honour of my old friend, Mr. Ludwig Glauert, who has been such a source of inspiration to all naturalists in this State. Several fishes have been named after him and now I add to their number a beautiful little Angler Fish from Western Australia.

Family ANTENNARIIDAE

Genus *ANTENNARIUS* Daudin, 1816

Antennarius Daudin, 1816, *Dict. Sci. Nat.* (Levrault), 2: 193. Logotype, *Antennarius chironectes* "Commerson," i.e., *A. chironectes* Cuvier, 1817, *Mem. Mus. Hist. Nat., Paris*, 3: 433, selected by Bleeker, *Atlas Ichth.*, 1865, 5: 5. For other synonyms, see Whitley, *Rec. Austr. Mus.*, 19, 1933: 103.

Antennarius glauerti sp. nov.

D. i/i/i/12; A. 7; P. 10; V. 5; C. 9.

Head (17 mm.) 2.3, depth (22) 1.8, and width (15) 2.6 in standard length (40). Eye, 3 mm., less than snout (3.5) and interorbital, 5.5. Maxilla *circa* 7 mm. Smooth stalk of illicium, 8.7 mm. depth of caudal peduncle, 5 mm.

Maxillary almost vertical, its slight expansion overlapped by skin and about one-third eye-diameter. Lower lip terminal, with few small flaps of skin. Small, backwardly-directed, movable, conic teeth on jaws, in several rows anteriorly, tapering laterally. Similar teeth on vomer and palatines. Tongue rounded, its tip free. Interorbital convex, one-third of head. Nostrils pore-like. Some simple and some branched dermal flaps form a "beard" on the chin. Gill-openings pore-like, at pectoral elbow.

Body covered with prickles. Some dermal flaps on flanks and fins. Lateral line well developed around eyes, preopercular and mouth, along upper part of sides and dipping to above posterior anal rays, then ascending caudal pedunele.

Stalk of illicium smooth and slender, its base overhanging mouth-opening. Esca large with three or four clenched plume-like lobes. Second dorsal spine shorter and thicker than first (the illicium), prickly and with long fleshy processes and followed by a membrane. A smooth, sunken illicial trough, above and behind the eyes, receives the second dorsal spine and its processes when adpressed. Third dorsal spine erect, with curled tip and membrane uniting it to soft dorsal, subequal to second dorsal spine and 2½ in head. Third to ninth soft dorsal rays longest. Most dorsal rays simple, others only slightly bifid near tips. Last ventral and most of anal and caudal rays deeply divided. Anal fin opposite posterior half of soft dorsal and, like it, free from caudal, leaving pronounced pedunele. Fourth anal ray longest, sub-equal to height of soft dorsal, but less than the expansive caudal. Pectorals well incised; ventrals stumpy.

Colour in alcohol, light brownish with irregular darker brownish-grey areas flowing down sides of head and body. Dark brownish-grey spots on fins become almost black in places. Illicium yellow, ringed with pale brown. Eye blue. Tongue yellowish. Esca light brown with grey bases to lobes. No white spots on body and no translucent spots on caudal fin. General facies as figured.

Differs from other species in its coloration, fin-counts, long first dorsal spine with large illicium and esca and in its outlines. The expansive anal and caudal fins separated by the well-developed caudal pedunele are noteworthy.

Described and figured from the unique holotype, Australian Museum registered no. IB.2979, a specimen 40 mm. in standard length or 53 mm. (2.1 inches) overall.

Antennarius glauerti sp. nov.